What is Claimed is:

[c1] A mask having a pellicle, the mask which comprises:

a first and second monitor structure;

the first monitor structure located in an clear region close to a transition between an opaque and clear region of the mask such that pellicle degradation impacts the printing of the object;

the second structure located at a position on the mask such that it overlaps with the first when printed.

[c2] The mask of claim 1 wherein the first and second monitor structure are structurally of the same form.

[c3] The mask of claim 1 wherein the first and second monitor structures are placed at a stepping distance that will cause them to overlap when printed on a substrate.

[c4] The mask of claim 3 wherein the first structure monitor structure is located in an opaque frame and the second structure is located in a clear region close to the frame.

[c5] The mask of claim 2 wherein the first and second monitor structures are squares with the one in the opaque frame being clear and the one in the clear region opaque.

[c6] The mask of claim 1 wherein the clear region has a width of at least 2x and the first and second monitor structures are less than a distance x from the transition between the opaque and clear regions of the mask.

[c7] The mask of claim 1 also comprising a second mask for an adjacent level wherein a monitor structure is placed at the same relative location as a structure on the mask for which pellicle degradation is being measured.

[c8] The mask of claim 2 also comprising an additional set of reference structures is placed in an uniformly illuminated area.

[c9] The mask of claim 8 wherein the reference structures are at least a distance xr

away from the edge formed between the clear and opaque regions.

[c10] The mask of claim 4 also comprising a second set of symmetrically placed monitor structures alongside the frame on the opposing side of the mask.

[c11] The mask of claim 5 wherein the first and second monitor structures are placed at a stepping distance and where one of the structures is smaller than then other so that they will interlock when printed.

[c12] A mask which comprises:

a first set of monitors which comprise a first object located close to a transition area between an opaque and clear region and a second object in a location such that the first and second objects would overlap when printed;

a second set of monitors, which comprise a third object and a fourth object which are coincident to the first and second monitor structures except placed at a distance away from the first and second objects such that pellicle degradation will not affect their placement.

[c13] The mask of claim 12 wherein the transition area is defined by the frame of the mask.

[c14] The mask of claim 12 where the first, second, third and fourth objects configured so that difference between the overlays of the first and the second objects as relative to the differences in the third and fourth objects would measure pellicle degradation.

[c15] The mask of claim 12 where all the objects are square.

[c16] A method of determining pellicle degradation, comprising the steps of:

printing on a wafer with a stepper a mask image of monitor structures which are located in a transition between clear and opaque regions of the mask one stepping distance apart;

measuring the displacement between the printed monitor structures;

determining pellicle degradation by the degree which the structures are displaced from each other.

[c17] The method of claim 16 wherein one of the structures prints as resist and the other as clear.

[c18] The method of claim 16 wherein the step of printing comprises two steps: printing a first structure located in a transition region of the mask; and printing a second structure at an adjacent level located in the same position relative to the first structure so that it overlays the first.

[c19] The method of claim 16, wherein the stepper has its blades retracted during the wafer exposure.

[c20] The method of claim 16, also comprising the step of comparing the degree with which the structures are displaced with a measured displacement measured using the pellicle when it was new.